BARĀWA BIODIVERSITY PARK

Ministry of Agriculture, Agrarian Development, Minor Irrigation, Industries and Environment (Western Province)

Contents

- Biodiversity
  - World
  - Sri Lanka
- Global Warming issues and biodiversity
- Solution for Global Warming
- Barāwa Biodiversity Park (BBP)

BIODIVERSITY

Definition

The number and variety of organisms found within a specified geographic region.

BIODIVERSITY

Despite its relatively small land area of 65,610 sq.km, Sri Lanka is blessed with exceptionally high diversity of animals and plants.

Sri Lanka is recognized along with Western Ghats of India as an area having one of the richest biodiversity of the world known as a

"Biodiversity Hotspot"

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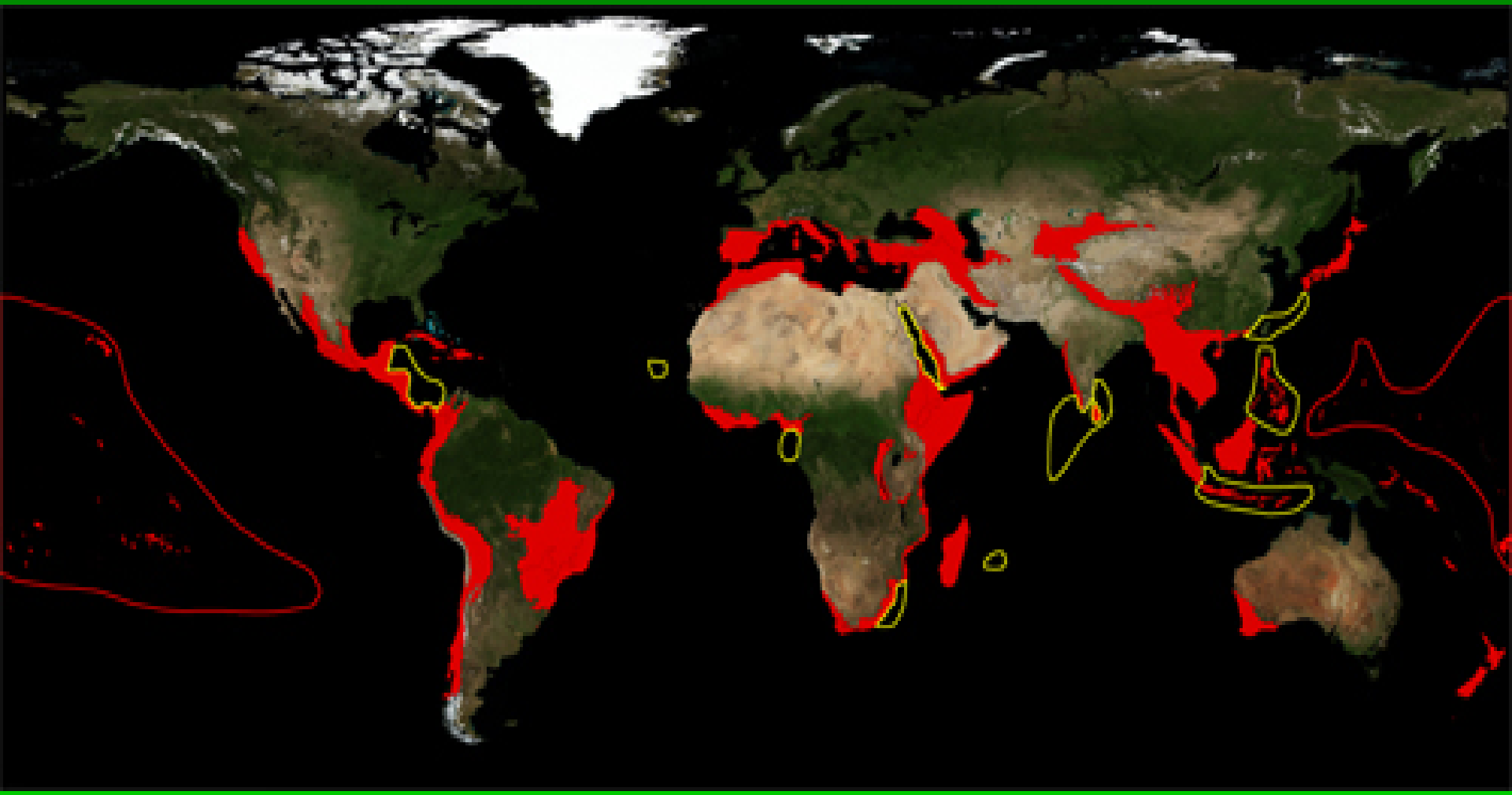
GLOBAL BIODIVERSITY HOTSPOTS



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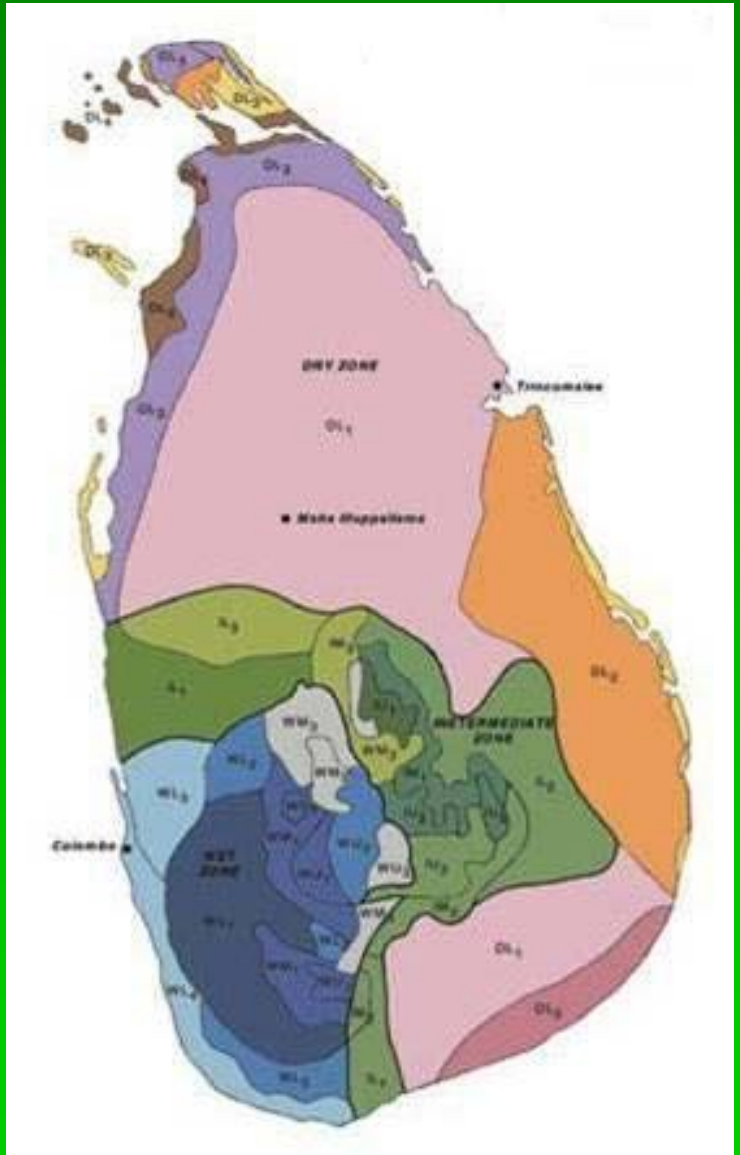
Sri Lanka-One of the world's Biodiversity Hotspots

Sri Lanka is listed as one of the twenty five (25) biodiversity hotspots in the world.

Much of the diversity and endemism is found in the South West wet zone.



BIODIVERSITY IN SRI LANKA

Endemic biodiversity in Sri Lanka is exceptionally high.

ENDEMIC SPECIES IN SRI LANKA

According to IUCN's Red List which is globally accepted as the status of world species,

out of the total number of species found in Sri Lanka

- **28.3% of flowering species**
- **86% of Amphibians**
- **50% of Reptiles**
- **54% of Fresh water Fish**
- **83% of Land-snails**

are endemic

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Classification of flora in Sri Lanka

- Total number of Natural Plants in Sri Lanka 5568
  - Out of that 1037 species are endemic.
- IUCN has evaluated 1099 species for the vulnerability.
- According to their studies
  - 533 endemic
  - 799 threatened
    - 251 critically endangered
    - 186 endangered
    - 238 vulnerable
    - 69 near threatened
    - 55 deficiency

RISK OF EXTINCTION

- 21 species of endemic Amphibians have not been recorded in Sri Lanka during the past 100 years are considered as extinct
- One in every 12 species of inland indigenous Vertebrates of Sri Lanka is currently facing an immediate and extremely high risk of extinction

RISK OF EXTINCTION

- One in every two species of Mammals and Amphibians
- One in every three species of reptiles and Freshwater Fish
- One in every five species of birds in the Island are currently facing the risk of becoming extinct

Horton Plains slender Loris

Kaloula Pulchra Toad

Source-2007 Red List of threatened fauna and Flora of Sri Lanka - IUCN

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Threatened Inland Indigenous Vertebrate Fauna in Sri Lanka

(Endemic species are within brackets)

Taxon	No of Species	Threatened
Mammals	91 (16)	41 (14)
Birds	227 (33)	46 (16)
Reptiles	171 (101)	56 (37)
Amphibians	106 (90)	52 (51)
Freshwater Fish	82 (44)	28 (20)

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Threats to Biodiversity

- There are many threats to biodiversity
- The most significant threat is Global Warming

GLOBAL WARMING

- **Global warming threatens the very existence of mankind**

- **Global warming also has serious effects on Biodiversity**

Solution to Global Warming?

- **Alternative style of living**

- **Traditional methods of living**

Concept of Eco-village

- An eco-village is a self sustaining community aimed at developing alternative ecological, environmental and social standards

- The ultimate goal of the eco-village is to create an environment that can support itself through its own development

Eco-village – Ctd...

- **The world's present course is unsustainable and postponing action is no longer an option**

- **Eco-village will be the only way forward if the world is to continue**

Eco-village – Ctd...

- **The Eco-village is the prototype of the community of the future**

- **Recycling, reuse, solar energy and non toxic materials are used by the Eco-village as standard**

Eco-village – ctd...

Main principle of an eco-village is not to take away more from the earth than we can give back.

ECO-VILLAGE DWELLERS WANT TO ENHANCE THE QUALITY OF THEIR LIVES AT NO COST TO THE ENVIRONMENT.

Traditional Village Vs Eco-village

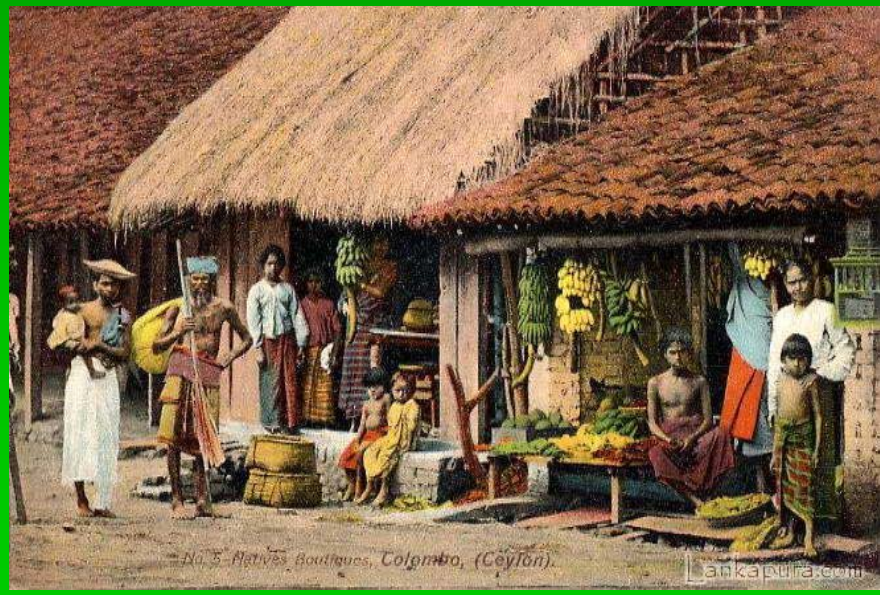
Compare the "Modern" concept of an "Eco-village" with our very own traditional villages.

We can see many of the concepts of the eco-village being practiced in our traditional village.

Traditional Village

- The way of life in our traditional villages was a model of living in harmony with nature

- Unlike today's fast paced city life which is fast spreading even to rural areas, the lifestyle of yesteryear is the antithesis of today's consumerist society



Traditional Village at Barāwa

- The village which will be created at Barāwa will consist of a;
  - Paddy field
  - Reservoir
  - Temple
  - Other components of a traditional village.

- This will illustrate an alternative style of living to today's generation
- Foreign visitors to the country too will learn how our ancestors lived in harmony with nature according to the Buddhist way of life

BARĀWA BIODIVERSITY PARK

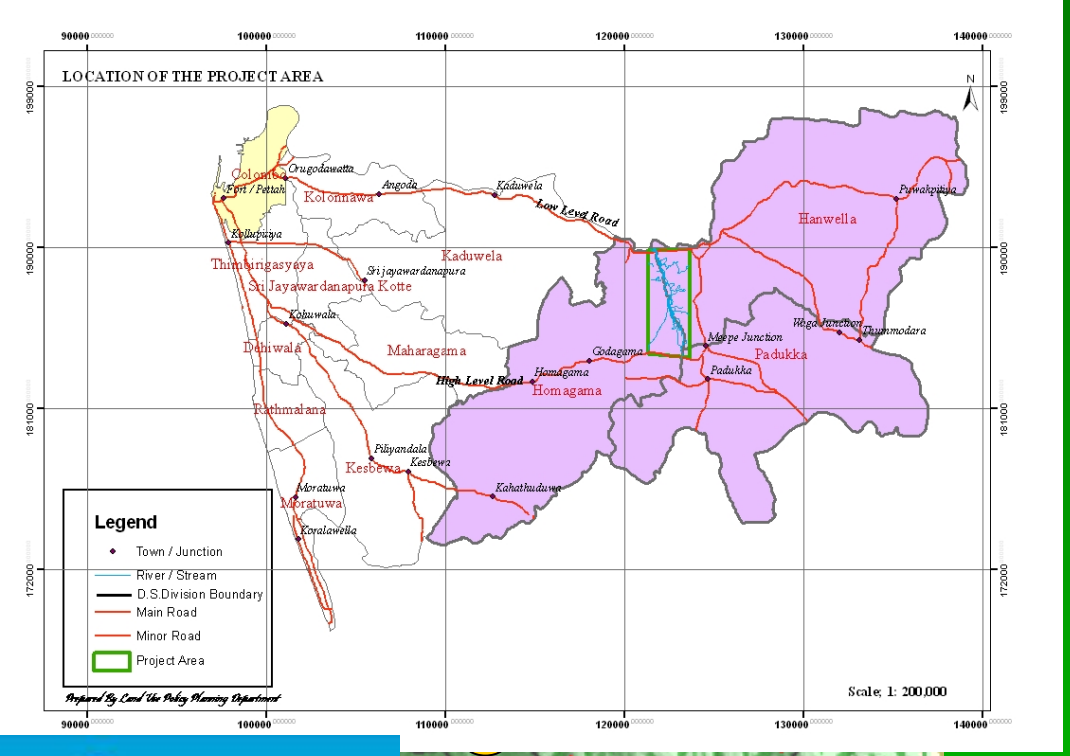
OBJECTIVES

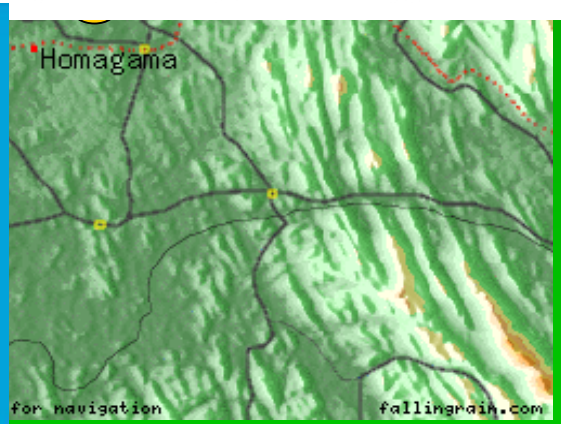
- Conservation of biodiversity
- Conservation and appreciation of Sri Lankan cultural heritage and preservation of traditional knowledge
- Adoption of an eco-friendly lifestyle
- Upliftment of living standards of the people of the area
- Flood Control

Location of Barāwa Biodiversity Park

- Barāwa Biodiversity Park (BBP) is located within the Biodiversity Hotspot in Sri Lanka
- The project area is located only 22 km away from the capital city

Project Location in Relation to Capital City





PROJECT AREA

Satellite Image of Project Area

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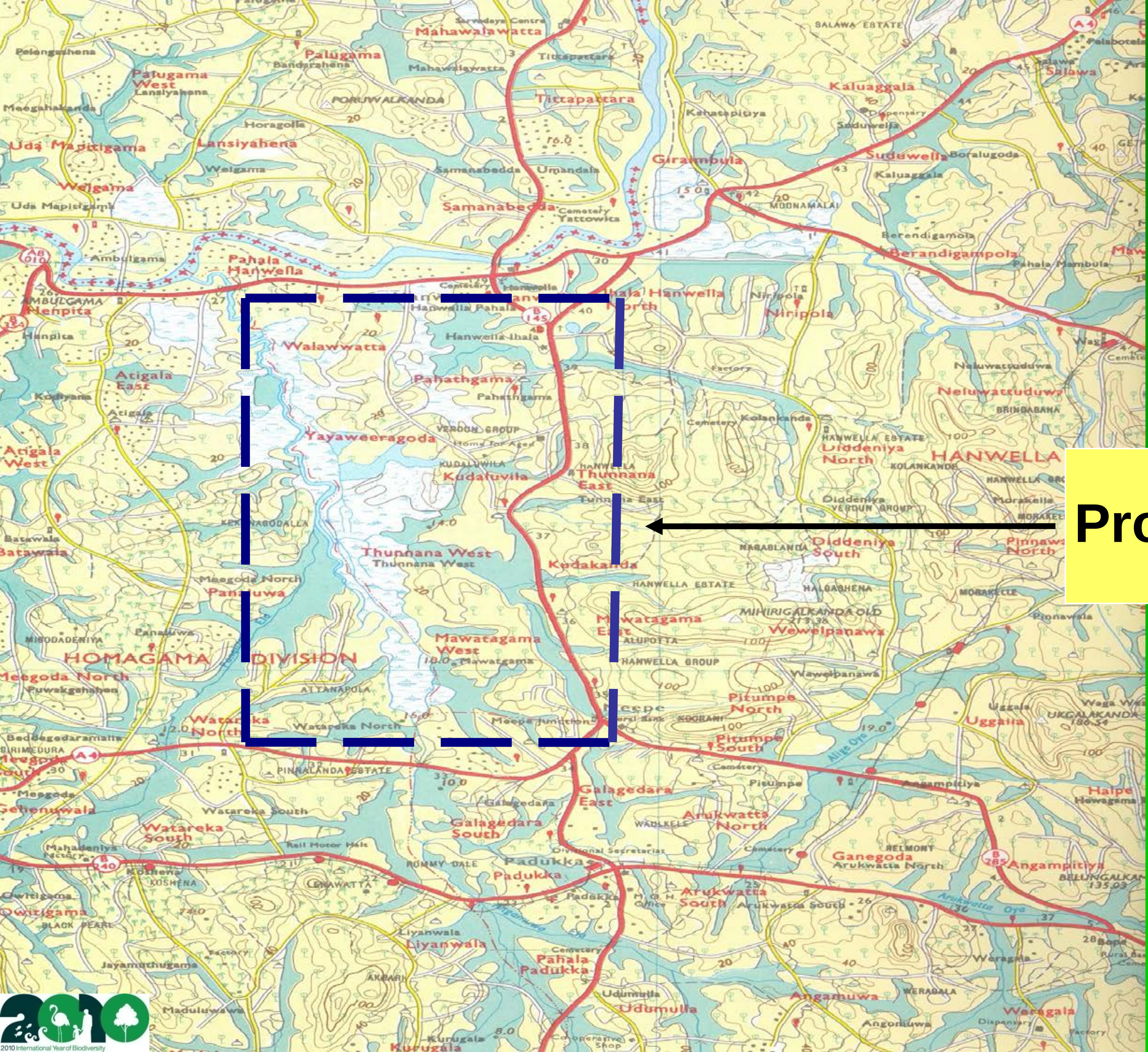
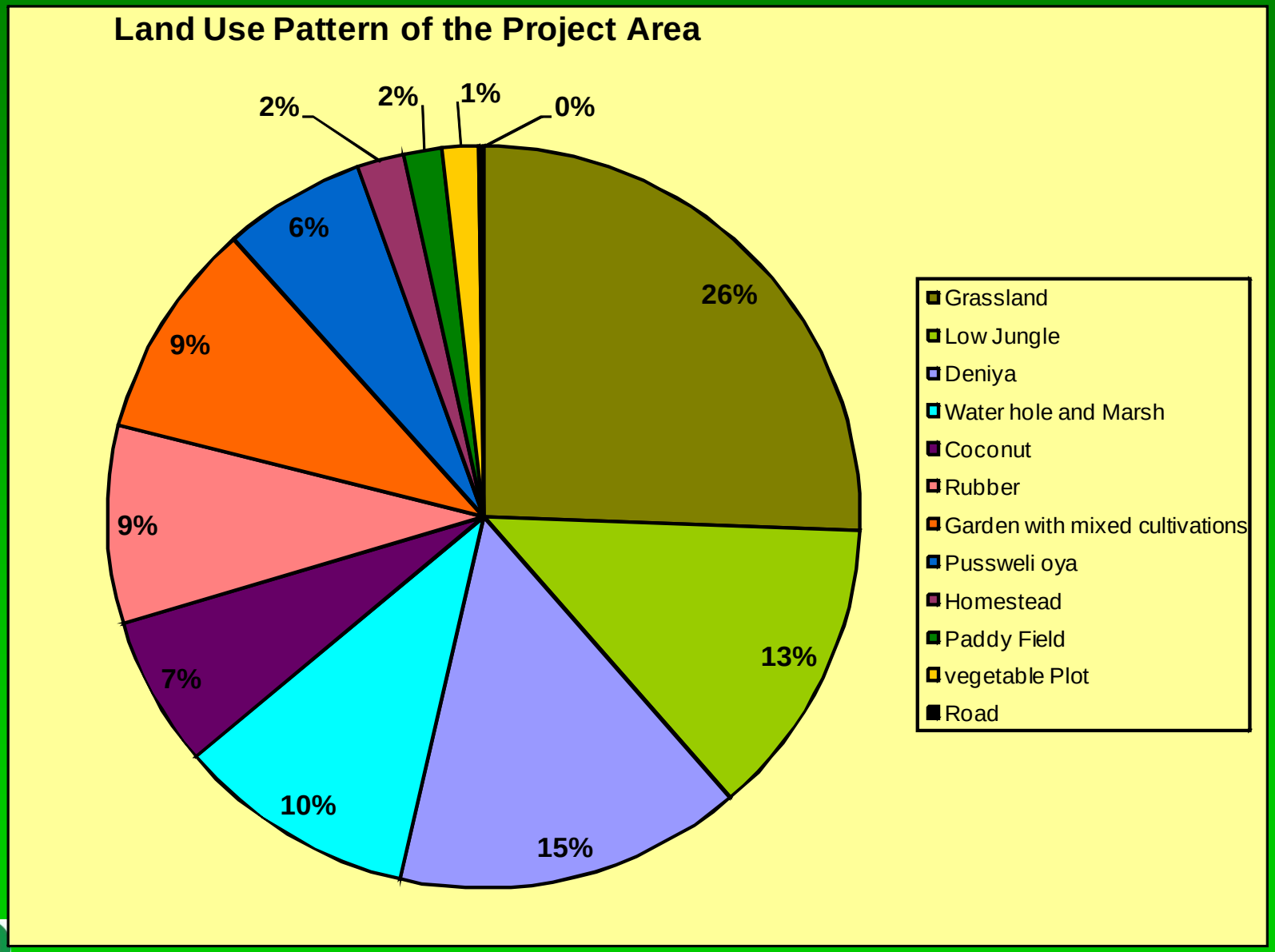
PROJECT AREA
180 hectares (444 acres)

Divisional Secretariat	Area in Hectares
Padukka	10
Seethawaka	70
Homagama	100
Total Area	180



Project Area

Present Land Use Pattern

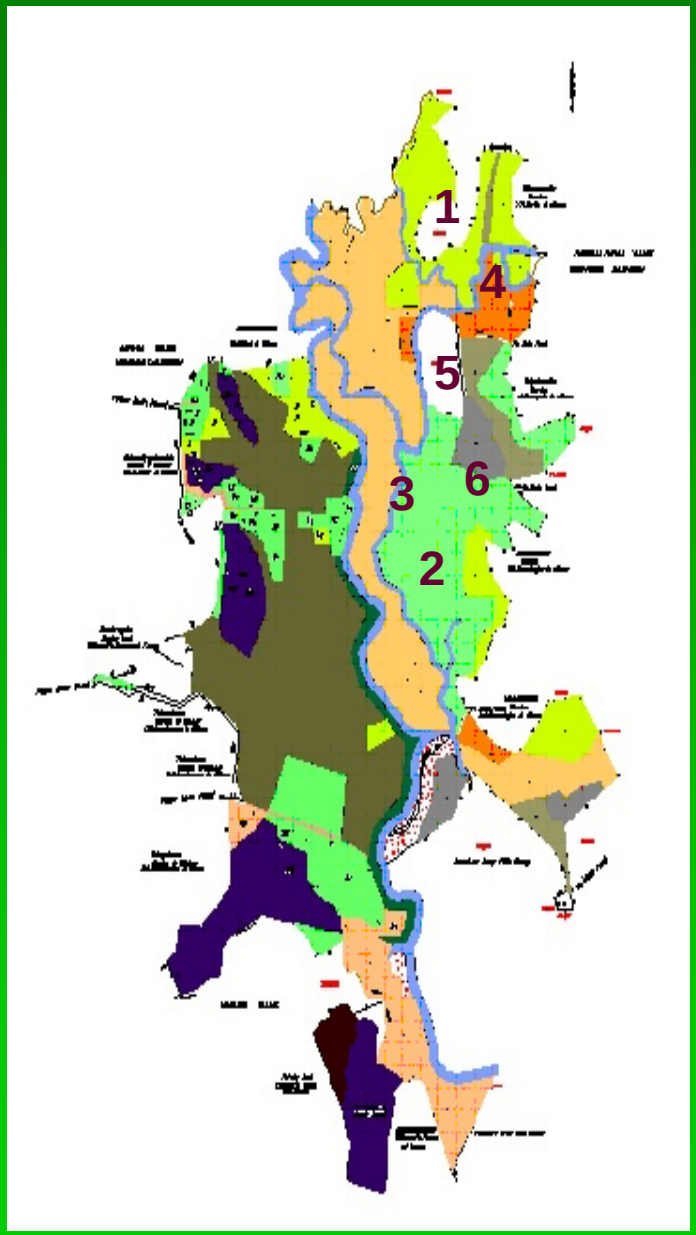


Existing Situation in the Northern Project Area

1- Cemetery

2- Grazing lands

3- Small Stream



4- Rubber Plantation

5- Vegetable Plots

6- Marshy Lands

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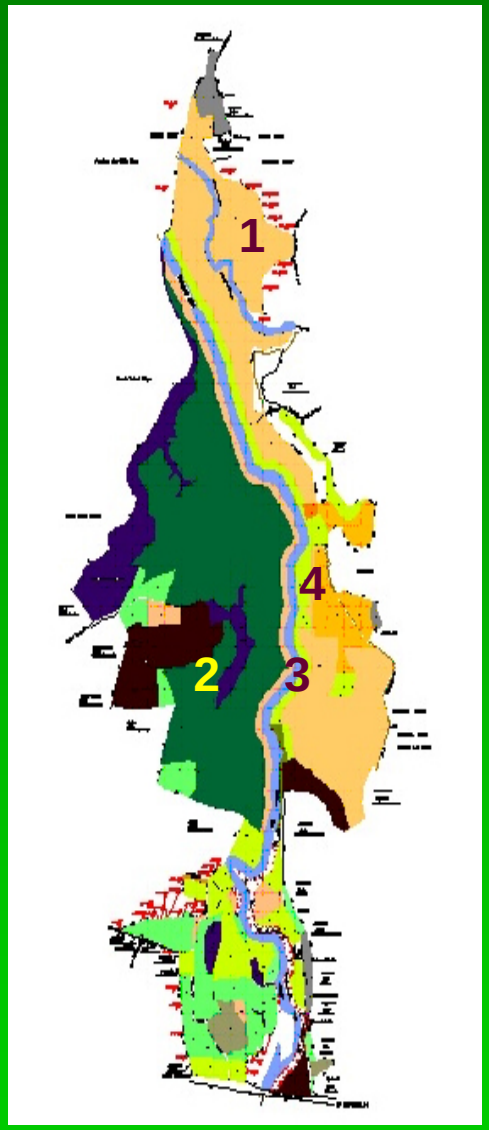
Existing Situation in the Southern Project Area

1- Bare land



3- Pusweli Oya

2- New land preparation

4- Cultivated area

Main Project Activities

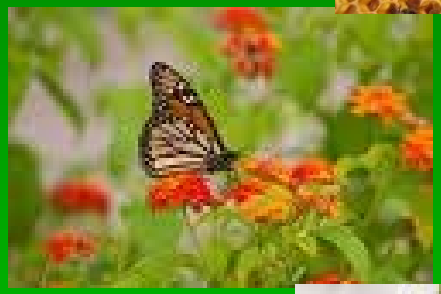
- Flood control and provision of infrastructure
- Model paddy field, reservoir and traditional eco-village
- Introduction to traditional cultural practices
- Dairy farming

Main Project Activities-ctd…

- Temple and meditation caves
- Fruit and commercial ornamental flower and foliage cultivation
- Yam gardening
- Vegetable cultivation and sales outlet
- Compost making and biogas generation
- Energy generation and lighting using solar power

Main Project Activities-ctd…

- Bee keeping (Apiculture)
- Butterfly garden
- Medicinal herb garden
- Recreational facilities



Main Project Activities- ctd…

- Restaurants and outlets selling handicrafts
- Indigenous medicinal treatment centre
- Agriculture Museum
- Information centre for local and foreign tourists
- Observation towers
- Vermi composting

FLOOD PROTECTION

- **The project area is prone to flooding**

- **The creation of a traditional Reservoir (*wewa*) and canal system will ensure that the excessive flood water will be drained**

TRADITIONAL VILLAGE AT BARĀWA

Will include;

- Paddy field
- Temple
- Pottery making,
- Traditional handicraft making
- Paddy storage (*Wee Bissa*)
- Village Headman (*Arachchi*)
- Indigenous doctor

Visitors will be offered traditional costumes to wear during their visit

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DAIRY FARMING

- A dairy farm will be established in the premises

- Waste material from the dairy farm will be used for biogas generation and composting including vermi composting

Traditional Costumes

Kandyan Chief

Kanyan Chief and Village Headman

Traditional Cultural Practices

Women at work

Carriage Maker

Hand Crafting

Lace Making

Sinhalese Carpenters

Sinhalese Potters

Fruit Seller

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CULTURAL CENTRE

The cultural centre will feature traditional celebrations and functions such as;

- **A wedding**
- **Funeral**
- **Buddhist chanting (*Pirith ceremony)***
- **New Year (*Avurudu*) celebrations**
- ***Religious , Traditional dancing items***
- ***Nadagam, Kolam, Gammadu, Kavimadu***

Indigenous Medicinal Treatment Centre

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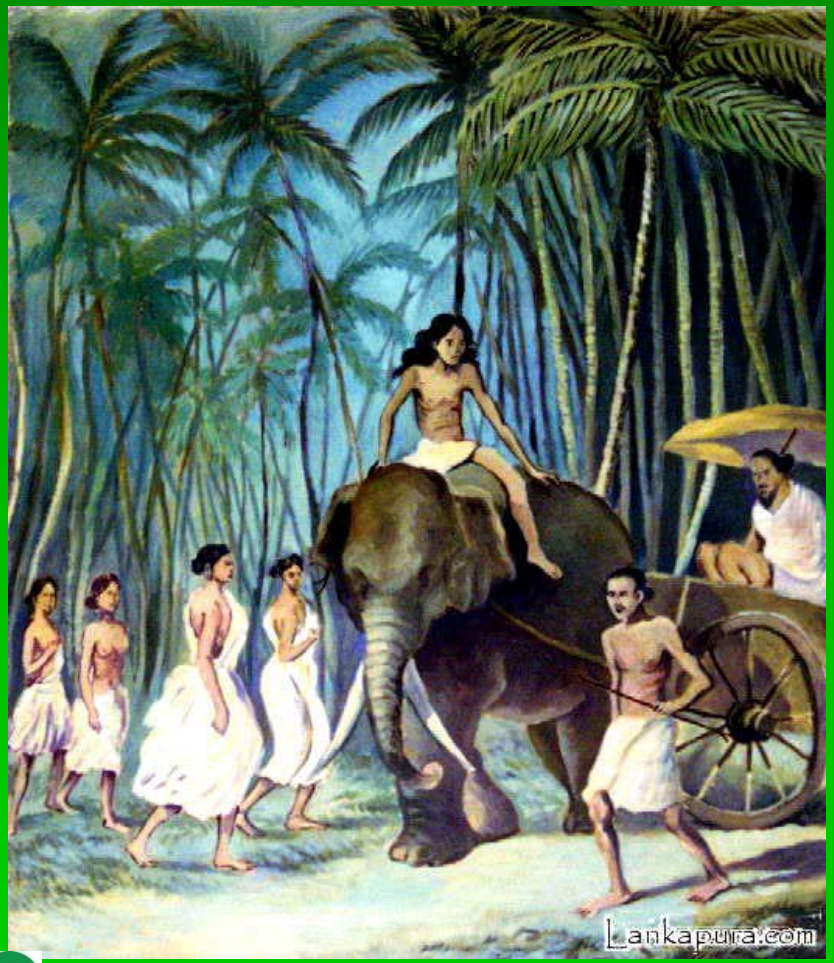
Transport Service

Traditional modes of transport such as bullock carts and “Dolawa” will also be used.



Canal Transport Service

Canals will be used for transport within the premises making it an environment friendly mode of transport without emissions or noise pollution.

Native Ferry Boat

Tourism

Eco Tourism will be promoted within this area in association with the Sri Lanka Tourism Development Authority and the private sector

- Green Tourism

- Green Buildings

Tourism- ctd...

- All solid waste generated will be separated as plastics, paper, glass and recycled
- All biodegradable waste such as kitchen waste will be converted into compost
- Rain water harvesting tanks will be constructed to collect rain water and thereby reducing water usage

Gardens

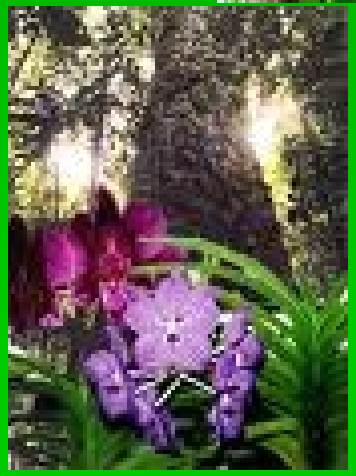
- **Fruit garden**

- **Herbal garden (*Osu Uyana*)**

- **Flower garden**

THE PARK

The Biodiversity Park will serve as a place where visitors could learn to appreciate the importance of preserving Biodiversity.



BUTTERFLY GARDEN

A section of the biodiversity park will feature different types of flowering plants which will attract butterflies thereby creating a butterfly park for visitor's pleasure and for learning purposes.




Small Branded Swift / Nectaring on *Catharanthus rosea*

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Some Selected Butterflies

Blue Tigers on *Crotalaria pallida*

Common Banded Peacock

Common Jezebel

Indian Fritillary

Dark Grass Blue

Ceylon Silver Line

Butter's Spotted Pierrot

Pea Blue

Grass Jewel

Lemon Pansy

WETLAND CONSERVATION

All naturally occurring wetlands within the BBP will be conserved and the public will be made aware of the services provided by these wetlands.

An information and observation tower will be constructed at the site in order to provide information on the importance of the conservation of wetlands to the general public.

Guiding Principles of Project Implementation

- No ecological service values will be compromised by the project (eg. Flood retention properties)
- State ownership of all lands within the project site will be retained
- Traditional user rights of the local communities will be respected and safeguarded

Guiding Principles of Project Implementation

- **Existing environment friendly livelihood activities will be promoted and supported while environmentally unacceptable activities will be discouraged by the provision of alternative opportunities**
- **Investment partnerships will be promoted within existing national policies and priorities**
- **Income generating activities which benefit the local population will be promoted**

Phase and Cost of the Project

Phase	Period	Cost (US$)
Phase I	Dec. 2010 - Dec. 2011	2,280,000
Phase II	Jan . 2012 - Dec 2013	7,125,000
Phase III	Jan . 2014 - Dec 2014	4,615,000
Total		**14,020,000**

PHASE I-Budget-Dec. 2010-Dec.2011

1.Specialized Studies-	
Feasibility study and plan for Biodiversity park	US$ 60,000.00
Sociological Survey	US$ 40,000.00
Flood/Drainage Study	US$ 60,000.00
Tourism Study	US$ 20,000.00
Cultural study	US$ 20,000.00
Study on traditional industries	US$ 20,000.00
Agricultural Study	US$ 250,000.00
Preparation of site plans	US$ 250,000.00
EIA Studies	US$ 60,000.00
Additional Studies by Technical Agencies Review of specialized studies and compilation	US$ 80,000.00
2. Study and promotional Tours	US$ 50,000.00
3.Establishment of Project Office	US$ 20,000.00
4.Purchase of two project vehicles	US$ 150,000.00
5. Key project staff for phase 1 (Salary & allowances)	US$ 80,000.00
6. Project Framework finalization-stakeholder consultation	US$ 10,000.00
7. Public awareness / relation activities	US$ 50,000.00
8.Construction of main roads	US$ 500,000.00
9. Administrative cost	US$ 60,000.00
10. Boundary fencing	US$ 500,000.00
Total	**US$ 2,280,000.00**

PHASE II BUDGET-Jan. 2011-Dec. 2013

1. Construction of reservoir, canals & implementation of other flood control measures	US$	1,100,000.00
2.Construction of paddy field	US$	150,000.00
3.Construction of road network	US$	1,000,000.00
4. Construction of temple and meditation caves	US$	75,000.00
5. Establishment of fruit and vegetable farms	US$	250,000.00
6. Flower garden, butterfly garden and Bee keeping	US$	300,000.00
7. Osu Uyana and weda gedara	US$	550,000.00
8. Yam Garden	US$	200,000.00
9. Dairy farm	US$	150,000.00
10. Waste management unit (composting and biogas units)	US$	250,000.00
11. Construction of cultural centre	US$	700,000.00
12. Construction of administrative complex	US$	500,000.00
13. Lightening and electrification of the Park	US$	110,000.00
14. Public relation and promotional activities	US$	75,000.00
15. Establishment of Project Office with full cadre, equipment, vehicles	US$	2,300,000.00
Total		**US$7,710,000.00**

PHASE III- Budget Jan. 2014-Dec. 2014

1. Administration cost of Establishment of hotels and accommodation facilities	US$	40,000.00
2. Establishment of trade stalls for organic products	US$	400,000.00
3. Establishment of Handicraft village	US$	350,000.00
4. Establishment of visitor centre and exhibition/education centre and observation tower	US$	1,000,000.00
5. Research centre in collaboration with universities	US$	100,000.00
6. Canal transport project	US$	1,000,000.00
7. Observation towers	US$	500,000.00
8. Site seeing vehicles	US$	200,000.00
7 Salary and maintenance	US$	1,500,000.00
9. Public relations and promotional activities	US$	75,000.00
10. Provision for the operational loss for 2015-2016	US$	750,000.00
Total		**US$ 5,915,000.00**

- Conservation of biodiversity is a global responsibility
- Please join hands with us to share our responsibility towards mother earth

Thank You

Total Land Area

Divisional Secretary Division	Hec.	Acres	Rood	Perches
Padukka	9.537	23	03	20
Seethawaka	70.922	174	04	19
Homagama	100.82	247	07	62.6
Total Area	**181.28**	**444**	**14**	**101.6**

MODEL LAKE, PADDY FIELD, TEMPLE AND ECO-VILLAGE

- The model lake
- Paddy field
- Temple
- Other components of a traditional village

will recreate our traditional heritage in an urban setting.